December 14, 2009

Silicon Labs Microcontrollers Deliver Industry's Lowest Active and Sleep Current

Ultra-Efficient 8-bit MCUs Ideal for Power-Sensitive and Battery-Powered Embedded Designs

AUSTIN, Texas, Dec 14, 2009 (BUSINESS WIRE) -- Addressing the need for energy efficiency in power-sensitive applications, Silicon Laboratories Inc. (NASDAQ: SLAB), a leader in high-performance, analog-intensive, mixed-signal ICs, has introduced the industry's lowest power microcontroller (MCU) family. Silicon Labs' ultra-low-power C8051F91x/0x MCUs dramatically increase battery life in portable designs and other power-sensitive embedded systems. The new F91x/0x MCUs are ideal for a wide range of applications where low power consumption is critical such as smart meters, RFID tags, personal medical devices, sensor interfaces, energy harvesting, home security systems, and smoke and fire detectors.

Consuming the industry's lowest current in common modes of operation, the 8-bit F91x/0x MCUs enable the lowest system-level power consumption in the embedded market. The power-efficient MCUs offer the lowest active mode current consumption (160 microamps per MHz), which saves power when the system is running. They also consume the lowest current in sleep mode, either with an active real-time clock and brown-out detect circuit (300 nanoamps) or without a real-time clock or brown-out detect circuit operating (10 nanoamps) while maintaining full RAM retention.

"When evaluating MCU alternatives, power-conscious system designers should assess a combination of active and sleep mode currents," said Tony Massimini, chief of technology at Semico Research Corporation. "Silicon Labs has designed its F91x/0x MCU family to deliver impressive low power consumption in both modes. In addition, the new MCU family taps into an extensive code base and offers an ideal memory size and peripheral set for optimal cost and power efficiencies."

In systems that use sleep modes, a significant amount of power can be wasted waking up the MCU and preparing it to acquire or process data. The F91x/0x family has been designed to wake up in an extremely short amount of time (less than two microseconds), minimizing the amount of time spent in an energy-wasting state. These industry-leading low-power specifications enable manufacturers to either extend the battery lifetime of their end products or potentially use smaller batteries, saving additional system cost.

"Silicon Labs' F91x/0x family leapfrogs other competitive MCUs by providing the lowest current in common operating modes without sacrificing performance, features or specifications," said Mark Thompson, vice president of Silicon Laboratories. "No other MCU vendor matches Silicon Labs' best-in-class power consumption in both sleep and active modes, further establishing our leadership in ultra-low-power MCUs for power-sensitive applications."

The F91x/0x MCUs expand Silicon Labs' award-winning C8051F9xx MCU family by offering cost-effective 8 kB and 16 kB flash memory options while providing 25 MIPS core performance and advanced analog peripherals such as an on-chip 12-bit analog-to-digital (ADC) converter with an autonomous power-saving burst mode. Silicon Labs' ultra-low-power F9xx family MCUs are software and footprint compatible, enabling developers to use one board layout and code set while migrating to lower-cost designs.

The F91x/0x MCUs integrate a highly efficient dc-to-dc converter designed to operate down to 0.9 V, enabling low-cost AA or AAA battery operation, which supports smaller form factors, reduces system cost and provides an innovative way to extend battery life. In addition, the dc-to-dc converter can supply up to 65 mW of output power to drive other system components such as LEDs, RF transceivers and sensors, creating a true single-battery system solution. This environmentally friendly, low-voltage capability ultimately helps consumers save money by reducing the number of batteries required for a given application by half.

Unparalleled Development Support

Silicon Labs' comprehensive development tools help speed design and accelerate market entry. The F91x/0x family is supported by the full-featured C8051F912 development kit, F912-based ToolStick and optional ToolStick Programming Adapters. C8051F9xx example code and Silicon Labs' battery life estimator GUI, a tool that helps designers optimize power, are also available at www.silabs.com/pr/lowpower and as part of each CD that ships with the development kit.

The ultra-low-power F91x/0x MCUs can be paired with Silicon Labs' CP240x liquid crystal display (LCD) drivers for power-sensitive designs that require LCDs such as thermostat displays, home security systems and personal medical devices. In addition, developers can combine an F91x/0x MCU with Silicon Labs' EZRadioPRO(R) wireless receivers for use in wireless nodes for weather stations, water and gas meters, home automation and security systems. Silicon Labs offers an RF-to-USB

reference design that demonstrates sub-gigahertz, USB and low-power technologies for F91x/0x-based platforms.

Pricing and Availability

The C8051F91x/0x family is available in a compact, 24-pin 4x4 mm package, which is ideal for space-constrained applications. Pricing for the C8051F91x MCUs starts at $1.69 in 10K quantities, and F90x 10K pricing starts at $1.53 (USD). C8051F912 development kits are available for $99. The ToolStick912DC daughtercard is available for $9.90, and the ToolStick912 UPP programmer is available for $69.00 (all prices USD). For additional product information and to purchase samples and development tools, please visit www.silabs.com/pr/lowpower.

Silicon Laboratories Inc.

Silicon Laboratories is an industry leader in the innovation of high-performance, analog-intensive, mixed-signal ICs. Developed by a world-class engineering team with unsurpassed expertise in mixed-signal design, Silicon Labs' diverse portfolio of highly-integrated, easy-to-use products offers customers significant advantages in performance, size and power consumption. These patented solutions serve a broad set of markets and applications including consumer, communications, computing, industrial and automotive.

Headquartered in Austin, TX, Silicon Labs is a global enterprise with operations, sales and design activities worldwide. The company is committed to contributing to our customers' success by recruiting the highest quality talent to create industry-changing innovations. For more information about Silicon Labs, please visit www.silabs.com.

Cautionary Language

This press release may contain forward-looking statements based on Silicon Laboratories' current expectations. These forward-looking statements involve risks and uncertainties. A number of important factors could cause actual results to differ materially from those in the forward-looking statements. For a discussion of factors that could impact Silicon Laboratories' financial results and cause actual results to differ materially from those in the forward-looking statements, please refer to Silicon Laboratories' filings with the SEC. Silicon Laboratories disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Note to editors: Silicon Laboratories, Silicon Labs, the "S" symbol, the Silicon Laboratories logo, and the Silicon Labs logo are trademarks of Silicon Laboratories Inc. All other product names noted herein may be trademarks of their respective holders.

SOURCE: Silicon Laboratories Inc.

Silicon Laboratories Inc.
Dale Weisman, +1-512-532-5871
dale.weisman@silabs.com